Saskatchewan
Industry and
Resources
Saskatchewan
Geological Survey

Saskatchewan Exploration and Development Highlights 2002

A.J. Gracie and G. Tourigny
Resident Geologists
Saskatchewan Industry and Resources
P.O. Box 5000
La Ronge, SK
S0J 1L0

103-03577/

Saskatchewan Exploration and Development Highlights 2002

A.J. Gracie and G. Tourigny

Surface mineral expenditures are estimated at $30.12 million in 2002, up 32 percent from the actual 2001 expenditures of $22.91 million (Table 1). Diamond expenditures are expected to increase 53 percent, to $7.29 million, reflecting a positive long-term view by the principal stakeholders in the Fort à la Corne area. Uranium expenditures are expected to increase 13 percent to $15.87 million. Gold expenditures will increase too, but estimated expenditures are still low at $2.61 million. Base metal and PGM expenditures remain low. New focuses are REE and tantalum exploration in the far north.

Table 1 – Saskatchewan mineral exploration expenditures in millions of dollars (Canadian) as compiled from the annual survey by the Saskatchewan Resident geologists.

	2002 (estimated)	2001 (actual)
Uranium	15.87	14.02
Gold	2.61	1.01
Base Metals	1.83	1.39
Diamonds	7.29	4.77
PGM	0.80	0.14
Rare Earths	1.42	0.66
Other	0.30	0.92
Total	**30.12**	**22.91**

URANIUM

In 2001, Saskatchewan remained pre-eminent in uranium production accounting for 100 % of Canadian and 34% of world output. McArthur River and Cigar Lake reserves are available to maintain this position in the future. Key Lake – McArthur River production for 2002 is forecast to be 7193 t U (18.7 million lb U_3O_8). The Cigar Lake mine could begin production in 2005 at an annual rate of up to 6924 t U (18 million lb U_3O_8) with a phased-in start up of about four years. The Rabbit Lake mill and Eagle Point underground mine re-opened this past summer.

The spot price for uranium has continued to slowly rebound from the all time low of US $7.10/lb U_3O_8 at the end of 2000. On November 11th, 2002, the uranium spot price (restricted) was US $9.90/lb U_3O_8 compared to US $9.75 at the end of September 2002. Cameco Corporation is the majority player in uranium mining and exploration in Saskatchewan, controlling 57% of currently identified reserves, with COGEMA Resources Inc. second at 35%.

Saskatchewan's mines produced 12 586 t U (32.72 million lb U_3O_8) in 2001 up 17% from 2000. Reserves and production facilities are presented in Table 2. Identified reserves within the Athabasca Basin are sufficient to sustain current production rates for the next 25 years.

Over a dozen companies, acting either independently or in joint venture programs, are exploring for uranium. Exploration in all parts of the Athabasca Basin is aimed at the discovery of other high grade and large tonnage unconformity-type deposits. Kennecott Canada Exploration Inc., who may earn a 65% interest in the Moore Lake uranium property, followed up encouraging results by drilling seven new holes. Best results were from DDH. ML-25 which returned 0.53% U(0.62% U_3O_8) over 9.1 m including a 4.8 m interval of 1.02% U (1.2% U_3O_8) that contained a 0.4 m interval of 10.18% U (12% U_3O_8). Pioneer Metals Corporation and Cameco Corporation have formed a new public company, UEX Corporation that is focussed on uranium exploration in the Athabasca Basin. Pioneer, Cameco and DF Exploration Uranium Ltd. properties give the new corporation a pooled land position in the Riou Lake, Black Lake and Hidden Bay areas. Last winter UEX Corporation reported a significant intersection of uranium in a potentially new, near-surface zone about 550m west of the West Bear deposit on the Hidden Bay property. COGEMA Resources Inc. cut multiple uranium-bearing intervals in two holes in the Caribou Lake area, approximately 2 km northwest of the SUE C open pit at the McClean Lake Mine Site. Several of these intersections have good grades. In 2002, COGEMA Resources Inc. undertook a new surface exploration program at Cluff Lake

[1] The information contained in this report is derived from press releases and quarterly annual reports by mining and exploration companies active in Saskatchewan. In some cases this information has been supplied in discussions with company representatives. The department of Industry and Resources and the Government of Saskatchewan do not accept liability for any errors, omissions or inaccuracies that may be included in, or derived from, this report.

Cigar Lake

Cameco Corporation 50.025% operator, COGEMA Resources Inc. (37.100%), Idemitsu Uranium Exploration Canada (7.875%) and TEPCO Resources Inc. (5.0%).

Cameco became the operator of the Cigar Lake project at the end of 2001 and will operate the production mine. The Cigar Lake Joint Venture Management Committee, with Cameco as the majority shareholder will guide operation of the mine and mill. With total proven and probable reserves of 89 045 t U (231.5 million lb U_3O_8) at an average grade of 16.16% U (20.6% U_3O_8) and total inferred resources of 45 465 t U (118.2 million lb U_3O_8) at an average grade of 14.35% U (16.92% U_3O_8), Cigar Lake is the world's second largest high grade uranium deposit. Production is not expected before 2005 assuming a positive production decision is made, regulatory approval obtained, construction completed and operating licenses received.

Table 2 – Published reserves for Saskatchewan uranium properties. (as of Dec. 31st, 2001)

Owner(s)*	Property/Deposit	Reserves(t U) (Unstandardized)	Grade %U	Production (t U) 2001***	2002**
	RESERVES**				
Cameco Corporation	Rabbit Lake	7270	1.02	1755	962
Cameco Corporation COGEMA Res.	Key Lake	346	0.45	6938	7193
Cameco Corporation – COGEMA Res.	McArthur River P2N	182 245	19.51	-	-
Cigar Lake Mining (Cameco Corporation – COGEMA Res. – Idemitsu – TEPCO)	Cigar Lake	89 045	16.16	-	-
COGEMA Res.	Cluff Lake	686	1.81	1308	1654
COGEMA Res. –Denison – OURD	SUE A, B, C, & D	14 116	1.53	2445	2250
	McClean	4962	1.78	-	-
	JEB	346	0.42	140	425
COGEMA Res. – Denison-OURD – Redstone Resources	'Midwest'	13 847	3.82	-	-
	RESOURCES				
Cameco Corporation	Rabbit Lake	768	0.75	-	-
Cameco Corporation - COGEMA Res.-JCU	Dawn Lake	4962	1.43	-	-
Cameco Corporation - COGEMA Res.	McArthur River P2N	42 272	8.05	-	-
Cigar Lake mining (Cameco Corporation – COGEMA Res. – Idemitsu – TEPCO)	Cigar Lake****	45 465	14.35	-	-

Notes:

* Operator first.

** All figures in the table may not conform to the CIM reserves and resources definitions and therefore may not be exactly comparable. Resources are Measured and/or Indicated unless otherwise specified. Figures presented come from the SMA Uranium in Saskatchewan Fact Sheets and the Cameco Corporation annual report.

*** 2001 production figures are from company releases and the Cameco Corporation annual report.

**** 2002 production estimated

The owners propose to develop the Cigar Lake Project at a capital cost of $350 million. After the initial test phase was completed in 1993, the project was operated on a care-and-maintenance basis until 1997 when a second phase of test mining commenced. This second phase of test mining was completed in late 2000, and the site is again being operated on a care-and-maintenance basis.

Current plans are for underground mining to be undertaken in two phases: Phase 1, potentially starting in 2005 and lasting 15 years, will deal with the high grade eastern part of the orebody; Phase 2 will extract the remainder. After a phased-in start up period of about four years, the mine will produce up to 6924 t U (18 million lb U_3O_8) annually. During Phase 2, annual production from lower grade western portion will drop to 2308 t U (6 million lb U_3O_8), but will last for approximately 25 years.

The McClean Lake JEB mill, 94 km away from the Cigar Lake Mine, will do all the initial processing of the ore mined at Cigar Lake during the 15 year Phase 1 period. The ore will be delivered by truck as slurry. Subsequently, the partially processed uranium solution will be split between the McClean Lake and Rabbit Lake mills for further processing. After Phase 1 all processing will be done at McClean Lake. In order to process ore from Cigar Lake, the JEB mill requires expansion from its current capacity of 3077 t U (8 million lb U_3O_8) to 4616 t U (12 million lb U_3O_8).

Cigar Lake Mining Corporation and COGEMA plan to dispose of Cigar Lake's potentially reactive and acid-generating waste rock into the SUE pit at the McClean site once that is mined out. A joint Environmental Impact Study on the subject was submitted to the regulators in 2001.

Currently the Cigar Lake Project has approval to do a limited amount of site preparation work while waiting to receive approval of its construction license application expected in the spring of 2003. The following must be completed before the Cigar Lake Mine can begin producing uranium ore:

- Cigar Lake site construction must be completed including the sinking of a new shaft.
- Regulatory approval of the joint venture's plan for safely disposing some of Cigar Lake's waste rock in the McClean Lake SUE C pit must be received.
- The licensed capacity of the McClean Lake JEB mill must be expanded, with regulatory approval to 4616 t U (12 million lb U_3O_8).

Cluff Lake

COGEMA RESOURCES INC... Operator (100%).

Originally scheduled to close in 2000, operations at Cluff Lake were extended into 2002 due to higher ore grades, available capacity in the Tailings Management Area (TMA), lower production costs and improved productivity. May 31st 2002, mining of the West Dominique-Janine orebodies was completed and the Dominique Janine mine closed. Using stockpiled ore, milling will continue on a one-week-on, one-week-off schedule to the end of 2002.

Mining and milling at Cluff Lake began in 1980 and produced more than 23 848 t U (62 million lb U_3O_8). In 2002, production is expected to be 1654 t U (4.3 million lb U_3O_8) – the highest total at Cluff Lake since 1997 when it produced 1962 t U (5.1 million lb U_3O_8). Cluff Lake open pit production was from the D, Claude, Dominique-Janine and Dominique-Janine extension operations. Underground production came from the OP, Dominique-Peter and Dominique-Janine mines. A gold mill, added in 1987, recovered 8000 oz Au and 800 oz Ag.

COGEMA Resources is implementing a phased shut down for Cluff Lake. The Cluff Lake Comprehensive Study was submitted to the regulators in early January 2001. This study described the company's proposed decommissioning plan, options, mitigation and environmental effects of decommissioning. The document covers the whole site, including the tailings management area (TMA), the mining areas, mill complex and other structures such as the camp and airstrip. Once the Canadian Nuclear Safety Commission and other federal agencies are satisfied, the document will be submitted to the Canadian Environmental Assessment Agency for public review. If regulatory approvals are received, decommissioning will begin late in 2003.

Meanwhile, Cluff Lake management has applied to do several site clean up activities in early 2003. These items include mothballing the mill once operations finish at the end of the year, extending the TMA leveling course, treating the water in the Claude Pit, and revegetating the OP DP, DJ and Cluff Center areas.

A long-term decision to restart the mill at a later date or completely decommission the site will depend on a number of factors such as uranium prices and exploration success. In 2002, the company completed a new surface drill program at Cluff Lake.

Key Lake Mill/McArthur River Mine

Key Lake Mill: Cameco Corporation, operator (83.333%); COGEMA Resources Inc. (16.667%). McArthur River Mine: Cameco Corporation, operator (69.805%) and COGEMA Resources Inc.(30.195%).

Key Lake, the largest high grade uranium milling operation in the world, produced 6938 t U (18.04 million lb U_3O_8) in 2001 primarily from McArthur River ore. Stockpiled ore from the Key Lake Mine provided 299 t U (0.78 million lb U_3O_8) of this total. For 2002, Key Lake production is planned to be 7193 t U (18.7 million lb U_3O_8) with Key Lake stockpiled ore providing 142 t U (0.37 million lb U_3O_8). Ore from McArthur River is mainly trucked to the Key Lake operation as slurry. There it is diluted with the remaining Key Lake low grade ore and McArthur dry-hauled low grade material grading from .025% U (0.03% U_3O_8) to 1.7% U (2% U_3O_8). The result is a blend averaging about 3.4% U (4% U_3O_8) – a grade suitable for processing at the Key Lake mill. Mill tailings are deposited in the Deilmann pit.

McArthur River is the world's largest high grade uranium deposit with proven and probable reserves of 182 245 t U (473.8 million lb U_3O_8) and an average grade of 19.51% U (23% U_3O_8).

Uranium ore, of the unconformity type, is structurally controlled by the P2N fault, which strikes N45°E and dips 45° to 60° southeast with a 70 m average offset. The ore has been traced along the P2N fault for 1700 m. The deposit's main attribute is very high ore grade which can reach 59.4% U (70% U_3O_8) locally. Average grades of 25.4% U (30% U_3O_8) over several meters are common.

The McArthur River Mine was established in 1993-94 and underground drilling campaigns defined ore in the central part of the deposit over a length of 550 m. Production by raiseboring began at the end of 1999 in zone 2 and yielded >4308 t U (>11.2 million lb U_3O_8) in year 2000. Mine production in 2001 was 6731 t U (17.5 million lb U_3O_8). The production rate has been in excess of the amount predicted by the current resource models, a fact that may be due to the conservative approach used by the estimators as well as other factors under study. Underground exploration drilling in 2001 continued along strike to the south.

Underground development is on the 530 m, 560 m, 580 m, 620 m and 640 m levels. Panels 1, 2, and 3 of Zone 2 are currently being mined behind a "freeze wall" which prevents water from penetrating into the mining area and allows the ore to be mined safely. Raise-bore mining is the sole, non-entry mining method being used. Line of sight remote controlled equipment is used to minimize workers' exposure to radiation. Ore is comminuted in a grinding system on the 640 m level, pumped to surface as a mud-like slurry, and then stored in tanks until loaded into specially designed containers for the 80 km truck haul to Key Lake.

McClean Lake

COGEMA Resources Inc., operator (70%, Denison Mines Ltd. (22.5%) and OURD (Canada) Co. Ltd. (7.5%).

The McClean Lake operation produced 2380 t U (6 million lb U_3O_8) in 2000 and 2585 t U (6.7 million lb U_3O_8) in 2001. The mill processes a blend of SUE low to high grade and JEB low grade ores for an average of 2.6% U (3.06% U_3O_8). The company has received regulatory approvals to increase the production limit to 3077 t U (8.0 million lb U_3O_8).

Pending government approval and a positive company production decision to mine at Cigar Lake, a second phase of construction is planned to increase the McClean mill's capacity to 4616 t U (12 million lb U_3O_8). An application to mill all Cigar Lake ore at McClean Lake rather than part at Rabbit Lake, as originally proposed, was submitted to the regulators. If the application is approved, McClean Lake and Rabbit Lake would share the pregnant solutions in the same proportion as originally proposed for ore during Phase 1 of the Cigar Lake mine's operation.

Mining of ore from the SUE C pit was completed in February 2002. Stockpiled SUE and JEB ore will continue to feed the mill into year 2006. The Sue C mine provided 650 000 t of ore grading just over 2% U (2.6% U_3O_8) and containing 14 031 t U (36.4 million lb U_3O_8).

The SUE A and B deposits might be developed sometime after 2004. The SUE A deposit would be mined from an extension of the SUE C pit. The SUE B deposit will require a separate pit. The company is also evaluating a third deposit, the SUE E.

DDHS.S-693 and S-700, drilled approximately 2 km northwest of the SUE C pit, in the Caribou Lake area, were reported to have cut multiple intersections of uranium last winter. The best intersection in DDH.S-693 was 5.9 m of 3.908% U (4.61% U_3O_8). DDH.S-700 cut 9.9 m of 4.078% U (4.81% U_3O_8) and 5 m of 8.282% U (9.77% U_3O_8) among other intervals.

All data were expressed as equivalent uranium grades, at a 0.1% U (0.12% U_3O_8) cut off, from the down hole radiometric probing and are subject to confirmation by geochemical analyses.

Midwest Property

COGEMA Resources Inc., operator (54.8%), Redstone Resources Inc. (20.7%), Tenwest Uranium Ltd. (20%) and OURD (Canada) Co. Ltd. (4.5%).

Although the Midwest mining project as described in the 1991 EIS, did not receive approval, COGEMA Resources Inc. successfully addressed the safety and environmental concerns identified during the first review process. Consequently, the federal-provincial panel recommended approval of this project too.

Midwest may be developed within the next decade as one of the sources of ore for the McClean mill. The deposit is in a 200 m long zone below south McMahon Lake. Ore will be mined by a jet-boring method, previously tested at Cigar Lake, then trucked to and milled at McClean Lake. The new approach addresses the radioactivity and water inflow concerns. Non-entry mining improves radiation protection, because the high-grade ore is contained in pipes and tanks. Also, water inflow will be reduced dramatically by ground freezing. Mink Arm of McMahon Lake will not be drained, thus environmental impacts will be significantly reduced. The Midwest Mine will produce 2200 t U (5.7 million lb U_3O_8) per year for six years. Following the government approvals in 1998 and the start up of the McClean mill in June 1999, a detailed review of the Midwest project is underway to optimize production.

Rabbit Lake

Cameco Corporation, operator 100%.

On July 24th 2002, Cameco announced that at Rabbit Lake, the longest-running Saskatchewan operation, mining had restarted at the Eagle Point underground mine. The mill restarted in August. Total 2002 production is expected to be 962 t U (2.5 million lb U_3O_8) ramping up to 2308 t U (6 million lb U_3O_8) on an annual basis.

The Rabbit lake mill was placed in care-and-maintenance mode in June 2001 after producing 1755 t U (4.6 million lb U_3O_8) in 2001 and 2790 t U (7.3 million lb U_3O_8) in 2000. Operations at Rabbit Lake's Eagle Point mine were suspended in early 1999 and this closure extended through 2000 and 2001. The mill operated in 2001 until existing stockpiles were depleted. Past production had increased from 2885 t U (7.5 million lb U_3O_8) in 1994 to 4616 t U (12 million lb U_3O_8) in 1997. Production then declined in 1998 to 4500 t U (11.7 million lb U_3O_8) and 2693 t U (7 million lb U_3O_8) in 1999.

A surface exploration drill program to identify new reserves was conducted during the past summer. Underground diamond drilling began in September and is ongoing. Current reserves are 7270 t U (18.9 million lb U_3O_8) enough to last three years. Although the operation may close again in 2005 after all the Eagle Point mine underground reserves are milled, the Rabbit Lake mill does have a long term future in the latter half of the decade when partially processed McClean Lake mill solution from Cigar Lake ore will be split between the McClean Lake and Rabbit Lake mills for further processing. Cigar Lake could reach production in 2005 or 2006, subject to market conditions and regulatory approvals.

GOLD

Claude Resources Inc.'s Seabee Mine produced 48 500 oz Au in 2001 compared to 58 300 oz Au in 2000 due to lower than expected grades from the mine's "D" zone. Gold production is expected to increase steadily through the second half of 2002 as the company accesses higher grade ore from the deeper levels of the mine's 2B zone. Since production began in December 1991 more than 2.1 million t of ore have been processed at an average 92.1% recovery rate to produce more than 500 000 oz Au.

The principal 2002 gold exploration program was that of Claude Resources Inc. who tested four targets in the Laonil–Santoy Lakes area. Drilling in the West Porky Lake area 2 km north of the Seabee Mine led to the discovery of a new shear-zone hosted, gold-bearing system associated with a metavolcanic-metasedimentary contact. Golden Band Resources Inc. announced, through letters of agreement with Golden Rule Resources Ltd. and Cameco Corporation, the successful consolidation of core land holdings within the La Ronge Domain gold belt. Golden Band, in cooperation with Masuparia Gold Corp. and Viceroy Gold Corp., has also signed a letter of intent with CDG Investments Inc. (formerly Golden Rule Resources Ltd.) that, subject to due diligence, would result in the acquisition of the Jolu mill. Masuparia Gold Corp. expanded their property in the Greywacke area and tested it with two drill programs. GLR Resources Inc.'s board of directors has approved the development of the Box and Athona deposits starting with a small pit on the Box. Kristo Gold Inc., given regulatory approval and successful

fund raising, will proceed with its plan to recover gold from the old Anglo-Rouyn Mines Ltd. tailings. Although gold exploration opportunities clearly exist in the province, only a small group of companies are active, compared to 60 in 1988. Table 3 summarizes past and present production, and reserve figures.

GLENNIE DOMAIN

Seabee Mine

Claude Resources Inc. operator 100%.

Ore grades improved in the third quarter of 2002 and 11,100 oz Au were produced from 45,700 tonnes of ore at an average grade of 7.6 g/t (0.22 oz/ton). This is an improvement over the first half of the year when 15,200 oz Au were produced from 106,400 tonnes of ore at an average grade of 4.8 g/t (0.14 oz/ton). The mine produced 48 500 oz Au in 2001. The reduction in grade during the first half of the year was attributed to the completion of mining and milling of the low grade Currie Rose Property D zone during the transition to the higher grade ore in the B and C zones below the 400 m level. For the first nine months of 2002, total cash operating costs were US $280/oz and the average realized gold price was US $306/oz.

A hoisting facility and shaft, which reaches the 395 m level, facilitates ore and waste transport to surface. The ore is processed in a two stage grinding circuit, which is then followed by cyanide leaching. Mill upgrades and improvements produced a 2001 throughput of 274 800 t at an average of 753 tpd. This compares to the original design capacity of 400 tpd. The average head grade processed during 2001 was 6.13 g/t (0.18 oz/ton) Au compared to 8.58 g/t (0.25 oz/ton) Au in 2000.

In 2001, mill feedstock was predominantly from the 2D zone between the 190 and 390 levels on the Currie Rose Property. The ore grade from this zone was much lower than expected, resulting in below target production levels. This property is 100% owned by Claude, subject to a 30% net profit interest payable to Currie Rose Inc., after payout of development, exploration, and other expenditures incurred by Claude to place the property into production.

Since production began at Seabee in 1991, most mining has been carried out above the 425 m level, generating more than 530 000 oz Au with an average ore grade of 8.47 g/t (0.25 oz/ton) Au. The company began development of the 425 m to 800 m levels of the mine in the second half of 2001, with positive results. Some of the best drill holes in Seabee history were drilled at the 650 m level during 2002. With regulatory approval an additional tailings containment facility is expected to be in service late in 2002. The annual ACA Howe International Ltd. report prepared in March 2002 established Seabee's total proven and probable reserves at 610 000 t grading 7.93 g/t (0.23 oz/ton) Au. The audit also documented inferred resources of 1,620,000 t grading 7.9 g/t (0.23 oz/ton) Au.

First quarter exploration completed 45 holes totaling 7760 m of BQ core in four target areas. Drilling in the West Porky Lake area discovered a new shear-hosted, gold-bearing system associated with a metavolcanic-metasedimentary contact. This composite vein system with assays spiking as high as 55 g/t (1.6 oz/ton) Au, and averaging 2-15 g/t (0.06-0.4 oz/ton) Au, is a potential satellite feed source for the nearby Seabee mill. East of the Seabee Mine, three target areas were tested. Two sulphide-bearing zones in the altered northern contact of a quartz monzonite were drilled in the Munro/Portage Lakes area. A number of holes cut wide intervals of silicified stockwork that assayed 1-3 g/t (0.03-0.09 oz/ton) Au with individual assays up to 8 g/t (0.23 oz/ton) Au. Because of its pervasive nature a follow-up program is planned.

In the spring of 2002, Claude Resources Inc. followed up on the West Porky discovery with a drilling program of 3355 m of BQ core in 18 holes. The discovery is on the Currie Rose Property, in which Currie Rose has a 30% net profits interest. Prospectors discovered visible gold in outcrop coincident with a two kilometer geochemical anomaly when following up previous programs in 2000. To date the company has drill tested approximately 600 m of this target's strike length where it parallels a major volcano-sedimentary contact between a feldspathic arenite and an altered metavolcanic rock described as a calc-silicate. Intervals containing gold intersections coincide with a south-southeast trending, steeply dipping (75° SW) shear structure. A banded, altered, diopside-bearing, shear zone in mafic volcanics contains gold for at least 400 m of strike length. Gold values correlate positively with the presence of sulphides, principally pyrite and pyrrhotite with minor arsenopyrite. Gold values between 2 g/t and 15 g/t (0.06 oz/ton and 0.44 oz/ton) Au (uncut) were routinely recorded over intervals ranging from 1 m to 3 m. Appreciably higher gold values associated with arsenopyrite over comparable widths were returned from a silicified

Table 3-Published reserves from selected Saskatchewan gold properties.

Owner(s)*	Property	Reserves (t) or Production(oz or t)	G/t	Oz/short ton
	MINED OR MINED TO DATE			
Cameco Corporation	Contact Lake Mine**	188 210oz		
	Bakos Zone	1 304 000	8.00	0.23
Cameco Corporation-Starrex-Uranerz Expl. Mining	Star Lake Mine	76 947oz		
	21+Rush zones**	182 291	14.70	0.43
Cameco Corporation-Shore Gold	Jasper Mine**	82 697oz		
		140 127	18.80	0.55
Claude Resources Inc.	Seabee	553 765oz***		
Corona Corp.-Int. Mahogany Corp.	Jolu Mine	230 751oz††		
	Rod+Mallard**	472 220	14.40	0.42
GLR Resources	Box	64 066oz		
Pamon Gold Mines-O.G. Macdonald	Prince Albert	4 882oz		
Golden Band Resources	Komis	26 885oz		
	RESERVES			
Claude Resources Inc.	Seabee Mine	605 220†	8.85	0.23
GLR Resources Inc..	Box & Athona	12 070 000	1.90	0.055
Kristo Gold	Anglo-Rouyn Mine	1 300 000‡	0.55	0.016
Golden Band Resources	Komis+EP	687 300‡‡	10.30	0.3
	RESOURCES			
Golden Band Resources	Bingo	239 350	11.60	0.34
Golden Band Resources	Corner Lake	181 500	13.00	0.38
Claude Resources	Seabee	1 620 000†	7.90	0.23
Claude Resources Inc-Cameco Corporation-Husky Oil.	Laural Lake	210 000	15.00	0.44
Golden Band Resources	Niko	165 700	4.80	0.14
Golden Band Resources	Tower East	922 000	6.90	0.20
Masuparia Gold Corporation	Greywacke	297 555†††	9.26	0.27
Petro Plus Inc.	Twin	351 000	6.20	0.18
Radcliffe Res. Inc.	"North" lake	2 360 000	2.40	0.07
Golden Band Resources	Weedy B	314 000	4.80	0.14
	Golden Heart	687 000	10.30	0.30
Golden Band Resources	Komis+EP	573 300‡‡	13.38	0.39

Notes:

* Operator first.

** Mined out. Reserves at start-up listed plus actual production oz Au. Properties now owned by Golden Band Resources.

*** Oz poured to end of September, 2002.

† September 2002.

†† Additional 1,500 oz estimated recovered during clean-up. Possibly additional ounces were also recovered in the test run.

††† Does not conform to current CIM reporting standards.

‡ Anglo-Rouyn mine tailings also contain 1.3 m tonnes of mineable reserves grading 0.0161 oz/ton Au, 0.0575 oz/ton Ag and 0.19 % Cu.

‡‡ Golden Rule Resources Ltd. 1995 Annual Report. Komis Mine reserves before production started and produced 26,885 oz.

part of the feldspathic arenite. This drilling also yielded very high-grade intersections associated with fault gouge that locally marks the volcanic-sedimentary contact. Diamond drill hole PKY02-01 cut a 3.05 m interval grading 54.33 g/t (1.58 oz/ton) Au from 69.25 m to 72.30 m in faulted calc-silicate, and another 3.00 m interval grading 14.12 g/t (0.41 oz/ton) Au from 122.70 m to 125.70 m in silicified arenite.

FLIN FLON DOMAIN

By the end of 1999, Claude Resources Inc. had earned a 35% working interest in the 14,300 ha Amisk Joint Venture property (Cameco and Husky). The company can earn a further 35% by spending $14 million or bringing the property into commercial production on or before the agreement's tenth anniversary in 2005. The optioners (Cameco and Husky) agreed to a one year extension of the work commitments as prescribed by the option agreement in 2000 and 2001. At Laural Lake, an underground program, that was to include remapping of previous workings, focussed drilling and limited development of raises, was deferred again pending improved metal prices.

LA RONGE DOMAIN

Golden Band Resources Inc. and Masuparia Gold Corporation are active in the La Ronge Domain. Golden Band has consolidated core land holdings within the La Ronge Domain, from Otter Rapids to Waddy Lake, resulting in a property portfolio of 50 000 ha. This consolidation brings the company's drill-indicated gold-bearing zones containing more than 800 000 oz Au in seven deposits, as well as numerous gold occurrences with exploration potential. Access to a permitted Jolu mill in the center of the project area offers an opportunity for the early resumption of production from any of the small, high-grade deposits within trucking distance of the mill. Although the majority of Golden Band's efforts will continue on its current holdings over the next 12 months, part of the company's effort will be focused on remodeling and drilling to increase the resources within the immediate vicinity of known deposits. This will include engineering and scoping studies to ascertain the economics for a central mill in the Waddy Lake area. Golden Band will also renew exploration for deposits based on targets already identified, and continue to pursue the identification of new target types such as the Memorial occurrence.

In 2001, Masuparia Gold Corporation optioned two gold properties: the Greywacke (Shane Resources 50%; JNR Resources Inc. 50%); and, the Dickens (United Carina Resources Corp. 50% and Consolidated Pine Channel Gold Corp. 50%). Masuparia had drilled 25 holes totaling 2030 m on the Greywacke property by the end of May 2002. Seventeen of these holes were on the Greywacke North zone, four on the Greywacke South zone, two on the Lyons zone and two exploratory holes along strike from the mineralized zones. The grades cut on the Greywacke North zone range to higher levels than those reported by Cameco, who discovered the prospect. Additional infill drilling will be required to make a resource estimate using current standards. Cameco calculated a Greywacke North resource of 297,555 t grading 9.26 g/t (0.27 oz/ton) Au.

Masuparia now interprets many of the Greywacke North zone host rocks as metapyroclastic rocks, not metasediments. Masuparia reported that DDH-GW02-57 confirmed a volcanic component at the north end of the Greywacke North zone, where the entire gold-bearing zone is in massive mafic rock cut by dykes of quartz-feldspar porphyry. This mafic rock may be part of a cross-cutting intrusive feeder. A significant Zn content has also been identified. Assays of up to 0.37% Zn were reported from the Greywacke North Zone and up to 1.18% Zn in the Greywacke South Zone. The company has speculated that the deposit may have a volcanic-exhalative origin or may represent a composite origin with hydrothermal gold mineralization superimposed on a low-grade volcanogenic zinc deposit. DDH GW02-57 cut a 10.41 m true width assaying 5.59 g/t (0.163 oz/ton) Au. Within, this interval the hole cut two 0.91 m (true width) intervals grading 19.68 g/t (0.574 oz/ton) Au and 22.6 g/t (0.659 oz ton) Au.

Masuparia has increased the scope of its exploration program in the Greywacke area, expanding its property to 5,786 ha encompassing a 25 km strike length of the favourable horizon. The additional claims cover areas of metavolcanic rocks mapped by the Saskatchewan Geological Survey about 10 km to the northeast of Greywacke Lake, and on strike with the Greywacke gold zones. Another area of untested exploration potential lies to the south of Greywacke Lake.

In 2002, Masuparia carried out an aggressive exploration program. Planned work was to include airborne geophysical surveying, detailed and semi-detailed lake sediment geochemical surveys, soil geochemical surveys, prospecting and geological mapping. This work was to be carried out in areas of volcanic rocks,and near the Missinipe thrust. Diamond drilling was also planned in the Greywacke North, Center and South zones, and channel sampling in the Greywacke and Lyons zones.

BEAVERLODGE AREA – NEVINS LAKE BLOCK
GOLDFIELDS PROJECT

GLR Resources Inc. operator (100%)

The board of directors of GLR Resources Inc. has given approval to proceed with the development of the Box and Athona open pittable gold deposits. The approval is based on an updated in-house engineering study that indicated the project was financially robust at SUS 300.00/oz Au and a Canadian dollar exchange rate of SC 1.50 to SUS 1.00. The study assumed an all gravity recovery system using Gekko equipment. Key points of the engineering study included: initial costs $ 16 million (mining $ 4 million, treatment $ 8 million, service and administration $ 4 million), gold production of 45,000 oz Au/yr averaged over 10 years, operating cash cost/oz < $US 200.00, and a mining rate initially at 1,500 tpd rising to 2,000 tpd. Environmental approvals were expected by late summer 2002. The ten year plan analyzed in the study is based on a measured and indicated resource of approximately 500,000 contained ounces at a grade of 2.7 g/t (0.08 oz/ton) Au. The company's global plan for the Goldfields property would be to develop, by expansion of the proposed Box mine plant, a central treatment plant to process ore from the Box and Athona deposits, as well other ore that may be defined from the successful exploration of known gold targets in the area.

BASE METALS

In 2002, Saskatchewan base metal production came from the Saskatchewan part of the Callinan Deposit and the Konuto Lake Mine. Exploration programs for volcanogenic massive sulphide deposits (VMS) continued in the sub-Phanerozoic parts of the Flin Flon Domain. There is also renewed interest in sediment-hosted copper in the Wollaston Domain.

FLIN FLON DOMAIN

Callinan Mine

Hudson Bay Mining and Smelting Co. Limited (100 percent subject to 6.67 percent NPI with Callinan Mines Ltd.)

The Callinan mine is a VMS deposit that consists of three east-plunging zones (South, East and North) in a sequence of rhyolitic rocks that are likely equivalent to the host rock ("mine rhyolite") of the Flin Flon Mine. Only the upper part of the Callinan North deposit extends into Saskatchewan. Since start-up in April, 1990, until the end of 2001, the Callinan mine produced 5,507,582 t of ore grading 1.41% Cu, 3.84 % Zn, 2.14 g/t Au, and 24.42 g/t Ag. Of this amount, 208,708 t grading 1.41% Cu, 4.17% Zn, 1.69 g/t Au and 17.68 g/t Ag came from the Saskatchewan part of the deposit.

Saskatchewan production in the first eight months of 2002 was 61,225 t of ore grading 1.57% Cu, 2.46% Zn, 1.51 g/t Au, and 10.90 g/t Ag from the North Zone lens. Production for the remainder of the year is estimated at approximately 21,000 t of ore grading 1.28% Cu, 2.70% Zn, 1.54 g/t Au and 16.46 g t Ag.

As of January 1, 2002, mineable resources in the Saskatchewan part of the North Zone were 675,765 t grading 1.19% Cu, 3.06% Zn, 1.54 g/t Au and 18.32 g/t Ag.

Konuto Lake Mine

Hudson Bay Mining and Smelting Co. Limited. operator (100 percent).

The Konuto Lake Mine is a structurally modified copper-zinc Cyprus-type VMS deposit hosted in Paleoproterozoic mafic volcanic rocks, 16 km to the west of Flin Flon, Manitoba. The north-northeast-striking, near vertical dipping, and steeply south plunging deposit has a strike length of approximately 180 m. The Cu-Zn-Au-Ag sulphides are in lenses, including four massive sulphide lenses (Lens 1, 3, 4 and 5), in a broad zone of oblique-reverse faulting. The ore consists of sulphide breccias and stockwork ore types mainly composed of chalcopyrite-pyrrhotite-sphalerite and minor pyrite. The ore zones extend from 18 m to approximately 445 m below the surface.

As of January 1st, 2002, the deposit's mineable reserves and resources were 1,175,488 t of ore grading 3.93% Cu, 1.54% Zn, 2.11 g/t Au and 8.36 g/t Ag. Since production began in 1998, to the end of 2001, the mine produced 773,012 t of ore grading 4.49% Cu, 1.22% Zn, 2.01g/t Au and 9.04g/t Ag. From January 1st to October 1st, 2002, the mine produced 224,870 t of ore grading 4.19% Cu, 2.03% Zn, 2.12 g/t Au and 9.05 g t Ag. Production for the remainder of 2002 is estimated at approximately 77,000 t of ore.

Table 4- Published reserves from Saskatchewan Base Metal Properties

Venture Operator	Property	Reserves and Resources (Metric Tonnes)	Cu %	Zn %	Pb %	Ni %	Co %	Au g/t	Ag g/t
	MINEABLE RESERVES								
Foran Mining	McIlvenna Bay	14 500 000	0.91	6.08	0.40	-	-	0.45	23.70
Hudson Bay Mining	Callinan Sask Portion	675 765	1.19	3.06	-	-	-	1.54	18.32
Hudson Bay Mining	Konuto Lake	1 175 488	3.93	1.54	-	-	-	2.11	8.36
	GEOLOGICAL RESOURCES								
Leader Mining International Inc.	Knife (Mokoman) Lake	20 000 000	0.74	-	-	-	-	-	-
Claude Resources	Elizabeth Lake	4 985 938	0.73	-	-	-	-	-	-
Boart–Longyear	Brabant/PEG	4 857 851	0.57	5.19	0.28	-	-	0.22	22.59
Hudson Bay Expl.	FON Zone	4 650 307	-	4.60	-	-	-	-	-
Con. Pine Channel	Axis Lake	3 402 000	0.60	-	-	0.60	0.15	-	-
Petro Plus Inc.	George Lake	2 630 880	-	3.67	0.53	-	-	-	-
Aur Resources	Schotts Lake	1 983 850	0.61	1.35	-	-	-	-	-
Aur–Cameco Corp.	Bigstone Lake	1 451 000 308 000	2.90 -	- 11.20	- -	- -	- -	- -	- -
Shane Resources	Brownell Lake	1 251 900	0.56	1.75	-	-	-	-	-
Cons. Pine Channel	Currie Lake	47 536	-	-	-	0.79	-	-	-

Notes:
* operator first

McIlvenna Bay Deposit

Cameco Corporation (76.1%) and Billiton Resources Canada Inc. (32.9%)

McIlvenna Bay is a VMS-type deposit, hosted by altered felsic metavolcanics, and consists of one main lens (Lens 2) and four smaller lenses (Lens 3, Lens 4, Upper West Zone and Copper Stringer Zone). The stratabound ore strikes approximately N30°E, dips 60° to 75° northwest and plunges approximately 45° northwest. Total combined, indicated and inferred resources for the Lens 2 massive sulphide, the Upper West Zone and the Lens 3 massive sulphide increased by 26% in 2000, and are now estimated to be 14.5 million tonnes grading 6.08% Zn, 0.91% Cu, 0.40% Pb, 0.45 g/t Au and 23.70 g/t Ag.

Foran Mining officially returned the McIlvenna Bay project to Cameco and Billiton this year.

Exploration

The Flin Flon Greenstone Belt saw limited base metal exploration in 2002. Hudson Bay Exploration and Development Company Limited (HBED) completed an 880.6 m drill program on ML 5518 to test the felsic mine horizon for Cu-Zn sulphides.

HBED tested Spectrum anomalies under the Paleozoic cover, south of Flin Flon with an extensive exploration program. Eleven drill holes totaling 2,578 m were completed on the Namew Lake property, and two holes totaling 843 m in the Suggi Lake area.

Aur Resources Inc. completed an exploration program on the Bigstone Lake area (Subphanerozoic Hanson Lake Block) where felsic to mafic metavolcanics and intrusions offer good potential for VMS, porphyry Cu-Mo, epithermal Au and shear zone Au deposits. In total, 50 km of magnetic and TEM surveys, followed by eight holes totaling 2876.7 m, were completed.

Aur Resources Inc. and partner Troymin Resources Ltd. completed 37 kilometres of TEM magnetic surveys and 6 diamond drill holes (1743.8 m) targeted on geological and untested TEM anomalies in the Hanson Lake area. The tested anomalies are located along a mineralized trend which hosts the McIlvenna Bay deposit five km to the north. The companies discovered a new Cu-Zn sulphide zone that returned 0.62% Cu, 0.55% Zn, 2.3 g t Ag and 66 ppb Au over 4.56 m core length. Downhole

pulse data indicate a strong conductor at depth, and more follow-up work may be undertaken next winter.

Wollaston Domain

Phelps Dodge Corporation of Canada staked 3 claims totaling 16,612 ha in the Janice Lake area, on the southeast side of the Wollaston Domain, where several sediment-hosted copper occurrences had previously been identified. The company plans an extensive program of structural mapping, IP, airborne magnetic, radiometric and geochemical surveys next year.

COPPER NICKEL SULPHIDES AND PGMS

Exploration expenditures for these metals are expected to remain low in 2001. The Peter Lake Domain was not active. Golconda Resources Ltd., HTML Managed Inc. and Lyncorp International Ltd. are the principal land holders. Land under disposition has contracted to 94 493 ha on October 1st. 2002. Uravan Minerals Inc. and BHP Diamonds Inc. have an option agreement whereby BHP can earn up to 70% in the Rottenstone PGN-Ni-Cu property by incurring $4.3 million in exploration expenditures. Red Feather Resources Inc. optioned the La Ronge Domain Gochagar property from Margaret Ducommun of La Ronge.

ROTTENSTONE DOMAIN

The Rottenstone Deposit consists of dense net-textured, disseminated, and rare massive PGM-Ni-Cu mineralization within a harzburgite-orthopyroxenite sill cutting a migmatized pelite horizon. The mine produced 26,057.8 t of ore, which averaged 3.28% Ni, 1.83% Cu, and 9.63 g/t PGM and Au. The PGM grades are exceptionally high. Four channel samples, taken from mine tailings, contain an average of 2.54 g t PGM and Au.

Since 1998, Uravan has accumulated a significant technical database on the Rottenstone property resulting in a total expenditure of about $1.3 million prior to 2002. Most of this work was focused on the Rottenstone Mine area resulting in a better understanding of how this deposit could have originated from a potentially much larger source nearby. Compilation and integration of the accumulated databases (geophysical, geochemical, structural, Landsat, and drill data) suggests the key to finding extensions to the Rottenstone deposit lie in deciphering its structural setting. The tree top biogeochemical survey conducted over the northern third of the property provided an invaluable multi-element database. Superimposition of the geochemical data on the structural map revealed that three northwest-trending (325°), multi-element, stacked anomalies coincide with northwest and north-northwest-interpreted faults.

Drill programs carried out by Uravan prior to 2002 were reconnaissance in nature amounting to 4118 m in 23 holes, with 2845 m in 14 holes of this total drilled in 2000. Five additional ultramafic sills outside the Rottenstone sill were intersected. Geochemically, these intersections were highly anomalous in the pathfinder elements Cr (> 500 ppm to 1466 ppm) and Ni (> 200 ppm to 489 ppm).

Following new gravity and EM surveys in the first quarter of 2002, BHP Diamonds Inc., under the supervision of Uravan Minerals Inc., planned an initial six-hole diamond drill program to start in the last week of June. This reconnaissance drill program was designed to test certain high density gravity anomalies, corresponding to the Zone 1, Zone 2 and the Bulls Eye targets, for nickel, copper and PGMs in ultramafic bodies. The program was suspended mid-July due to forest fires, after completing two holes to a depth of 200 m on Zone 1. Neither hole intersected significant ultramafic rocks. The drill program resumed on August 8th.

RARE EARTHS

Great Western Minerals Group Ltd., formerly Great Western Gold Corp., is earning a 70% interest in the Hoidas Lake rare earth property, 56 km northeast of Uranium City, from Daren Industries Ltd., through an option arrangement, with the potential to earn a 100% interest should Daren elect to revert to a royalty interest. Subsequently, Daren's position was acquired by a third party and Great Western Minerals signed an agreement in principle with the new owners to acquire a 100% working interest in Hoidas Lake. The property consists of 6,389 ha encompassing a 10 km long northeast-trending fault system hosting 26 separate rare earth showings.

Previous trench sampling over a 400 m strike length on the JAK zone exposed a central sheared unit averaging 4.9 % total rare earth oxides (TREO) over 3.2 m with individual assays as high as 20.3% TREO. Recent work by Saskatchewan Industry and Resources revealed that the REE-bearing minerals are contained in an up to 60 m wide system of veins that include a pyroxene-rich phase containing clinopyroxene, scapolite, allanite and amphibole and an apatite-rich phase that contains apatite and allanite.

In 2001, the JAK zone test area was drill tested over a strike length of 475 m and is open along strike. All holes started and ended in rare earth-bearing rock; the most northern drill hole was collared in rare earth-bearing rock and was still in it at a vertical depth of 65 m. This program yielded 1100 m of core, from 16 drill holes; over 2500 split core samples were processed and assayed by both the Saskatchewan Research Council and later by Lakefield Research Ltd. during Phase 1 metallurgical testing supervised by Melis Engineering Ltd. The overall average from a "skarn" composite was 5.28% Total Rare Earth Oxides. Process tests have determined simple cold acid leaching will achieve a 98.6% extraction rate of REO.

Sierra Mineral Management carried out a multi-element investigation of composite samples taken from the 2001 JAK zone drilling. Initial results, released in January 2002, revealed that, in addition to the significant values for rare earth elements reported previously, the Hoidas Lake core also contained potentially economic concentrations of Ti, Ga and Sc. Average scandium oxide values from the "skarn-type" intervals were 31 g/t Sc_2O_3. Gallium values averaged 20 g/t Ga. Titanium oxide assays averaged 1.05% TiO_2 immediately adjacent to the "skarn-type" intervals. Table 5 lists the combined assay results and recoveries for some of the 58 elements (or their oxide equivalents) tested for in the high grade, fault controlled "skarn type" mineralization and the results for the non-skarn granitic rock types using the patented leach process. The pricing is for metric tonne lots, except for lutetium (Lu) and thulium (Tm), and the range is for varying purity. Assay results refer to rock types and are not intended to represent the grade of any particular mineralized zone.

Table 5. Great Western Minerals Group Ltd. combined assay results and recoveries for some of the 58 elements (or their oxide equivalents) tested for.

Element/Oxide	Skarn Grade	% Recovery	Non-Skarn Grade	% Recovery	Price Range US$/kg Oxide: Metal
CeO_2 (cerium)	20 675 g/t	100	704 g/t	99	3-8: 7-40
Dy_2O_3 (dysprosium)	194 g/t	91	9 g/t	91	20-85: 80-142
Er_2O_3 (erbium)	72 g/t	62	3 g/t	92	21-290:275
Eu_2O_3 (europium)	299 g/t	100	7 g/t	100	250-275: 3000
Gd_2O_3 (gadolinium)	706 g/t	100	20 g/t	100	10-11: 80
Ho_2O_3 (holmium)	17 g/t	100	1 g/t	100	50-100: 578-844
La_2O_3 (lanthanum)	9 851 g/t	93	335 g/t	100	10-13: 15-30
Lu_2O_3 (lutetium)	4 g/t	93	0.4 g/t	75	950-2000: 3300-6900
Nd_2O_3 (neodymium)	11 154 g/t	91	253 g/t	100	8-100: 22-32
Pr_6O_{11} (praseodymium)	3 000 g/t	93	70 g/t	100	6-10: 18-22
Sm_2O_3 (samarium)	1 729 g/t	93	33 g/t	100	10-12: 55-65
Tb_4O_7 (terbium)	76 g/t	100	2 g/t	100	150-180: 335-690
Tm_2O_3 (thulium)	5 g/t	90	0.5 g/t	77	790-2000: 2200-11 500
Yb_2O_3 (ytterbium)	30 g/t	97	3 g/t	91	78-110: 260-420
Y_2O_3 (yttrium)	828 g/t	82	43 g/t	91	13-16:95-115
Total rare earth oxides	48 926 g/t	94	1 490 g/t	99	
Ba (barium)	5 869 g/t	17	9 286 g/t	97	2:
Ga (gallium)	3 g/t	100	20 g/t	100	:350-450
Rb (rubidium)	12 g/t	00	131 g/t	74	:160-10 000
Sc (scandium)	21 g/t	20	16 g/t	87	800-15 000: 9300-30 000
Sr (strontium)	8 779 g/t	95	3 174 g/t	100	:8
TiO_2 (titanium)	2 400 g/t	28	10 500 g/t	89	12-17:
Zr (zirconium)	82 g/t	11	264 g/t	100	:20-26
P_2O_5 (phosphate)	24.19 %	93	0.68 %	95	0.30:

Sierra Management has concluded that the Hoidas Lake rare earth occurrence is well suited to heap leaching and metal recovery through ion exchange technology. This approach offers the flexibility to rapidly respond to changing market conditions by recovering the specific elements on demand. From the results of the 2001 drilling on the JAK Zone, Sierra calculated an initial resource of 1.03 million tonnes (1.14 million tons) to a depth of 61 m. Average grades for the specific elements have not yet been calculated and an inferred mineral resource will be reported when calculations are complete. Because none of the drill holes to date have penetrated the "non-skarn" mineralization, a definitive resource calculation for these rock types will follow further drill testing.

In 2002, Great Western Mineral Group's summer program included the collection of several hundred kilograms of rare earth element-bearing rock for further metallurgical test work. The subsequent winter program is designed to investigate more than two dozen showings south of the JAK zone through ground geophysical surveys, rank the showings based on geophysical response and drill test the top priority targets. The company also plans further drilling of the JAK zone as a prelude to potential open pit mining. This will include infill drilling to establish and upgrade ore reserve classifications. Base line environmental studies will be started in spring 2003.

Currently Sierra Management is carrying out advanced metallurgical testing. These tests consist of two phases. Phase 1 tests are designed to select the best non-toxic solvent or combination of solvents for leaching the desired elements. Phase 2 testing will be actual heap leach tests designed to match the solvent or solvents selected in Phase 1 to appropriate ion exchange resins to produce a marketable product. Results of this testing are expected in November 2002.

TANTALUM

In January 2001, Leader Mining International Inc. acquired the 61 000 ha Bright Lake property 70 km north northwest of Stony Rapids. The property covers coincident tantalum-cesium-rubidium anomalies in lake sediments previously identified in a Geological Survey of Canada lake sediment sampling survey. During September and November of 2001, the company completed two regional reconnaissance sampling programs over the project area. They identified pegmatite bodies up to 2 km long and 500 m wide. A total of 57 rock samples, 37 stream sediment samples and 20 lake sediment samples were collected. Four areas were identified with elevated Ta values. Samples of the pegmatites contained up to 337 g/t Ta_2O_5 and values of 5500 g/t Rb. The geological setting is reported to be comparable to the Greenbushes Mine, Australia which averages 230 g /t Ta_2O_5 from pegmatites. The 2002 summer field program, which included a detailed geological mapping and sampling program over the outcrops with elevated tantalum, was designed to identify drill targets for a winter 2002 03 drill program. Tables 6, 7 and 8 summarize results from the 2001 program. Table 9 summarizes the highlights of lithogeochemical sampling program by presenting values greater than 60 g/t Ta_2O_5.

Table 6. Leader Mining International Inc.. September/November 2001 Program
Rock sampling results from two pegmatites

Sample	Location	Date	Ta2O5 g/tonne	Li ppm	Rb ppm	Cs ppm	Sn Ppm
8109	E Marchant	Sept 01	54	62	467	22	85
8110	E Marchant	Sept 01	118	528	5 500	238	695
8122	E Marchant	Sept 01	147	126	578	61	80
8123	E Marchant	Sept 01	104	109	116	6	42
755340	E Marchant	Nov 01	74	291	3 220	164	386
755341	E Marchant	Nov 01	77	261	3 180	170	376
755344	E Marchant	Nov 01	62	40	903	26	18
8117	Premier South	Sept 01	337	110	438	75	49
755162	Premier South	Nov 01	291	103	916	52	22
755334	Premier South	Nov 01	93	89	1 290	108	2
755336	Premier South	Nov 01	92	137	487	45	29
755337	Premier South	Nov 01	120	66	60	7	9
755353	Premier South	Nov 01	75	67	1 380	38	2

Table 7. Leader Mining International Inc. September/November 2001 Program. Lake sediment sampling to confirm Geological Survey of Canada Lake Sediment Tantalum anomalies in the Bright Lake area.

Sample	Location	Ta Ppm	Rb Ppm	Cs Ppm
LS AD 02	Addie L	1.0	66.0	11.0
LS AD 03	Addie L	1.0	47.0	13.0
LS AD 04	Addie L	1.0	51.0	12.0
LS AD 05	Addie L	1.3	81.0	15.0
LS MAR 04	Marchant L	1.0	44.0	7.8
LS MAR 05	Marchant L	1.3	140.0	15.0
LS SE 04	Premier South L	0.9	81.0	6.7
LS TPS 03	TPS Lake	1.0	120.0	11.0
LS TPS 07	TPS Lake	1.7	97.0	11.0
LS TPS 08	TPS Lake	1.4	58.0	12.0

Table 8. Leader Mining International Inc. September/November 2001 Program. Stream sediment sampling to test inflow and outflow streams of Lakes with strongest lake sediment anomalies.

Location	Ta ppm	Li ppm	Rb ppm	Cs ppm	Sn ppm
Addie Lake	3.9	192	146	57	2
Addie Lake	3.1	87	80	6	2
Addie Lake	7.5	133	86	10	6
Addie Lake	3.1	84	50	11	9
Marchant Lake East	4.9	87	113	17	5
Marchant Lake East	2.0	134	92	35	2
Schurman/Marchant/S-Bay	3.0	50	5	4	2
Schurman/Marchant/S-Bay	2.3	124	76	19	11
Schurman/Marchant/S-Bay	2.5	72	54	19	5
Schurman/Marchant/S-Bay	4.9	127	104	20	12
Schurman/Marchant/S-Bay	4.3	83	88	15	9
Schurman/Marchant/S-Bay	3.1	60	71	14	2
TPS Lake	2.5	104	109	10	11
TPS Lake	4.0	37	56	9	2

Table 9. Leader Mining International Inc.. Summer 2002 Program. Lithgeochemical Sampling Program Results. List of Values > 60 g/t Ta_2O_5.

Sample	Area	Date	Ta2O5 g/tonne	Li ppm	Rb ppm	Cs ppm	Sn Ppm
763204	Addie NE	July 2002	81	260	618	29	85
763002	E Marchant	July 2002	87	160	2 250	86	289
755572	E Marchant	July 2002	74	210	3 470	161	417
763001	E Marchant	July 2002	59	44	166	9	12
755571	E Marchant	July 2002	56	165	2 800	122	296
763300	Marchant Lake	July 2002	81	135	470	22	17
763307	Marchant Lake	July 2002	60	60	481	23	16
755510	Mavor Far N	July 2002	111	23	37	3	11
763013	Mavor N	July 2002	83	25	69	3	9
755534	Pegm X-1	July 2002	57	31	42	9	11
755530	Pegm X-1	July 2002	50	6	443	6	13
763228	Pegm X-2	July 2002	98	30	770	28	18
763223	Pegm X-2	July 2002	69	9	540	13	16
755501	Premier South	July 2002	586	76	2 610	35	55
755503	Premier South	July 2002	155	72	790	85	38
763026	Premier South	July 2002	151	60	552	49	55
755504	Premier South	July 2002	91	97	2 130	145	40
755582	Premier South	July 2002	89	74	2 460	136	49
755502	Premier South	July 2002	78	140	237	15	36
763323	TPS Lake	July 2002	144	25	372	16	18

DIAMONDS

On October 1 2002, the amount of land under disposition for diamond exploration was approximately 686,642 ha, up 35% from the same date in 2001. This figure is still low compared to the 4 million ha under disposition in the early 1990s at the height of the diamond boom. Some 20 companies hold ground in the Fort à la Corne area. Final 2001 exploration expenditures of $4.77 million are estimated to increase at least 53% to $7.29 million in 2002. All expenditures are expected to be in the Fort à la Corne area.

This revival of the Saskatchewan diamond play is due to a number of factors that include unfettered access to mineral dispositions, proximity to infrastructure, a re-evaluation of the diamond exploration paradigm, and two ongoing major projects still reporting an improvement in projected grades. Recently, Great Western Minerals Group Ltd. reported positive results from its reactivated Candle Lake option. The two major projects are the De Beers Canada Exploration Inc.-operated Fort à la Corne joint venture and Shore Gold Inc.'s Star Kimberlite.

CANDLE LAKE PROJECT

The Candle Lake joint venture (CLJV) is between the Great Western Diamond Corp., a subsidiary of Great Western Minerals Group Ltd., and War Eagle Mining Co. Inc. Through a purchase agreement, Great Western Diamond Corp. may acquire an 80% interest in CLJV and will carry War Eagle's 20% interest until the completion of a bankable feasibility study.

The 22,663 ha CLJV property, north of the Fort à la Corne trend, covers three diamond-bearing kimberlite bodies of an estimated combined 78 million tonnes. Prior NQ (4.76 cm diameter) drilling resulted in the recovery of 70 macrodiamonds (one dimension > 0.5 mm) and 343 microdiamonds from 3.67 t of core samples. Best overall projected grade was 27 cpht. The macrodiamond frequency and projected grade are comparable to results from other kimberlite bodies in the province at similar stage of exploration. A recent Saskatchewan Geological Survey compilation of geochemical data for 28 Saskatchewan kimberlites showed the Candle Lake kimberlites to be near the top of the G10 garnet frequency, and second in terms of frequency of chromites plotting in the diamond inclusion field.

In 2002, Great Western Diamond Corp.'s drill program was designed to test up to four targets with HQ size (6.35 cm diameter) core. The targets were selected on the basis of ground resistivity surveys carried out near the diamond bearing kimberlites. Although three targets are near kimberlite 29/30, but outside the limits as defined by ground magnetic surveys, they may represent an extension of the kimberlite. One target, near kimberlite 28, appears to represent a new discrete kimberlite body. The program's purpose was to provide a better understanding of the kimberlites' true geometry and help identify the optimum location for a larger mini-bulk sample.

Three holes were completed on kimberlite 29/30. Hole WSL-8, a step-out hole collared approximately 200 m east of the known boundary of kimberlite 29/30, on a weak magnetic and resistivity anomaly, failed to intersect any significant thickness of kimberlite. Holes WSL-9 and WSL-10, spotted on the southeast part of the kimberlite, were designed to in-fill the 0.5 km gap between holes WSL-94-3 and Kennecott Canada Inc.'s CL-95-09. WSL-9 cut 75 m of kimberlite and WSL-10 cut 107 m of kimberlite, the thickest intersection to date on kimberlite 29/30. The next phase of definition drilling is planned to begin in January 2003.

In September, the company released initial analytical results, from the Saskatchewan Research Council, for the first 25 samples. A total of 126 diamonds, including 5 macrodiamonds (one dimension > 0.5 mm) were recovered from 170 kg of material. Further processing will be delayed until additional funds have been raised.

FORT À LA CORNE JOINT VENTURE

The Fort à la Corne (FALC) project is a joint venture between De Beers Canada Exploration Inc. (42.25%), Kensington Resources Ltd. (42.25%), Cameco Corporation (5.5%), and UEM Inc. (carried 10%). Exploration is focussed on 63 kimberlite bodies that constitute one of the largest kimberlite fields in the world. Geophysical modeling of the kimberlites suggests they range from 2.7 to 250 ha in plan. The kimberlite bodies are relatively unique in that they are dominantly pyroclastic crater facies material.

The main objective of the joint venture's 2001 program, which included ten large diameter (61 cm) reverse circulation boreholes, was to obtain sufficient macrodiamonds to improve the confidence limits of the modeled average diamond values and grades for kimberlite body 141. Revenue modeling is based on extrapolated sample grades, diamond values and geological modeling. In 2001, the joint venture indicated that for body 141, preliminary modeling indicated a possible range of diamond values of

between US$90 to US$179/carat (SSV or standard selling value) for macrodiamonds larger than 1.5 mm. Modeled macrodiamond (>1.5 mm) values for the tested part of the kimberlite ranged from US$17 to US$32/tonne.

In mid June 2002, the joint venture announced macrodiamond recovery results from the 2001 drilling program. Minibulk samples totaling 889.8 t of kimberlite from kimberlites 141 and 150 were processed for recovery of macrodiamonds > 1.5 mm in size. A three-stage diamond recovery process (screening, dense media separation and final recovery) produced 463 macrodiamonds having a combined weight of 41.85 carats from kimberlite bodies 141 and 150. This total includes a number of larger stones including 7 stones >0.5 carat and an additional 9 stones between 0.3 to 0.5 carats, all from body 141. In July 2002, the joint venture announced the recovery of three previously unreported macrodiamonds from 141. A macrodiamond weighing 3.35 carats, the largest to date from this project, was recovered from the upper part of drill hole 141-20 during final diamond recovery from previously unexamined, clay-rich DMS concentrate. Two additional stones weighing 0.28 carats (drill hole 141-28) and 0.125 carats (drill hole 141-23) were also recovered during a routine tails audit of +4 mm material from selected samples acquired during the 2001 drilling program.

Table 10 presents the raw macrodiamond results from the 2001 drilling program. Sample grades were variable throughout 150-08 and ranged as high as 6.38 cpht. Kimberlite 141 borehole sample grades ranged from 2.164 cpht (drill hole 141-27) to 7.449 (drill hole 141-20). The best interval sample grades were 21.274 cpht from the lowermost 6.6 m in 141-24, and 17.871 cpht from 174-186 m in drill hole 141-22.

Table 10. Fort à la Corne Joint Venture. Macrodiamond recovery results for 2001 minibulk samples

Drillhole	Minibulk Mass (tonnes)	Stones (>1.5 mm)	Total Carats
141-20	95.586	47	7.12
141-21	93.399	53	6.225
141-22	84.129	50	6.115
141-23	104.589	73	6.265
141-24	76.940	43	4.205
141-25	66.681	35	1.925
141-26	82.472	63	5.165
141-27	76.463	26	1.655
141-28	88.589	41	3.795
141 Subtotal	**768.848**	**431**	**42.47**
150-08	120.958	35	3.135
2001 Program Total	**889.806**	**466**	**45.605**

Representative kimberlite samples from core holes 141-09 and 141-12 were submitted to Lakefield Research Ltd. in Ontario for complete diamond recovery to a lower limit of 0.074 mm (74 µ) utilizing caustic dissolution techniques. These two core holes were selected because they showed kimberlite lithotypes not previously tested. A total of 267.67 kg in 32 samples, covering 158.1 m of kimberlite intersection in core hole 141-09, yielded 153 microdiamonds collectively weighing 0.065 carats. A total of 227.54 kg in 28 samples, covering 140.0 m of kimberlite intersection in core hole 141-12, yielded 271 microdiamonds collectively weighing 0.078 carats.

Mid-July 2002, interim results for the 2001 evaluation program were presented to a joint venture technical meeting and final results were presented in October, 2002. Based on the results from 2000 and 2001, the joint venture approved a $CDN 5.2 million program directed at the 141/140 kimberlite body.

The first phase of this program, from September 5th to October 9th, involved drilling 23 core holes on the center of kimberlite body 141 and the southern part of body 140, now considered part of the 141. These were drilled to increase understanding of the geological context of the kimberlite and to site large diameter holes. The second phase, which is currently underway, will consist of three 91 cm (36") air-assist, mud-flood, reverse circulation holes in a tight cluster around core hole 141-29 and large diameter hole 141-04, which in 2000, returned significant grades and larger stones. This phase of drilling will also include five 61 cm (24") holes in areas of perceived diamond potential elsewhere in the 140/141 kimberlite.

Additional 2002 work will include initial ore dressing studies on the 141/140 kimberlite and a conceptual modeling exercise (similar to a scoping study, but less specific) that will provide thresholds for several preliminary mining options based on varying factors such as size, depth, thickness, grade and value. The main purpose of this study is to provide the joint venture partners with a reference point for the revenue models currently being produced by De Beers.

STAR KIMBERLITE PROJECT

Shore Gold Inc.'s Star Kimberlite is at the southeast end of the FALC kimberlite field. This kimberlite consists of diatreme and pyroclastic crater facies rocks covering an area of 4 km^2 in plan, and ranging from 3.0 m to more than 540 m thick. Based on a minimum cut-off thickness of 30 m and geological modeling substantiated by drill holes, preliminary estimates of continuous kimberlite exceed 500 million tonnes, with an average thickness of 88 m.

Following Phase I and 2 drill programs in 2000-2001, and in preparation for the extraction of a bulk sample of approximately 25,000 tonnes from the Star Kimberlite, Shore Gold recovered a sample of 82.7 t of dry kimberlite from a large diameter, reverse circulation drill hole, Star 031RC, close to diamond drill hole Star 026. Kimberlite chips were forwarded to the De Beers DMS plant in Grande Prairie for processing. The DMS plant produced a heavy mineral concentrate (containing diamonds) of 394.5 kg which was divided into approximately equal samples – one half was sent to De Beers Geological Sample Processing Services (GSPS) laboratory in Johannesburg for diamond recovery; the other half was shipped to Lakefield Research Ltd. in Ontario for diamond recovery.

On May 21st, 2002, the company reported that very positive results had been obtained from processing the 82.7 t sample from Star 031RC. A total of 184 macrodiamonds were recovered that did not pass through either a 1.18 mm square mesh sieve at Lakefield or a De Beers standard Class 1 diamond sieve (equivalent to approximately 1.1 mm sq mesh), with a total weight of 8.52 carats. The two largest stones recovered (both of which are fragments) weighed 0.64 carats and 0.40 carats. All kimberlite fragments were passed over a 1.2 mm screen on the drilling shaker table, so any liberated diamonds smaller than this would not have been included in the samples.

Shore Gold considers these results to be highly encouraging, especially as the size of the kimberlite chips that were sent for processing were smaller than anticipated. It would appear that as a result of a combination of factors, the drilling technique resulted in an over grinding of the kimberlite in the hole. Also,Lakefield observed eclogitic minerals in the samples which could be highly significant. Eclogite may be highly diamondiferous and relatively minor amounts of diamondiferous eclogite in the mantle source region can lead to high diamond grades in the host kimberlite.

The results from processing this sample will help to evaluate the properties of both the kimberlite and the specific characteristics of the diamonds. These properties and characteristics must be determined prior to finalizing the extraction method required to take the larger sample of 25 000 tonnes and the treatment plant's design required to process it. The bulk sample is required to determine the Star Kimberlite's economic potential.

FORT À LA CORNE – OTHER COMPANIES

Buckshot Holdings Ltd. and Commando Holdings Ltd. hold 77,953 ha in the immediate area of the Fort à la Corne kimberlites. JNR Resources Inc. has agreed with United Carina Resources Corp. and Consolidated Pine Channel Gold Corp. to option 12,500 ha of properties. Some of these properties are located northwest of, and along or adjacent to, the same structural lineaments associated with the main FALC kimberlite cluster. Others are up ice of the Sturgeon Lake kimberlites. Pan Terra Exploration Corp., formerly Rampton Resources Corp., has option agreements with United Carina Resources Corp. (50%) and Consolidated Pine Channel Gold Corp. (50%) whereby Pan Terra can earn a 60% interest in the 'Diamond Lady' and Smeaton properties. The Diamond Lady property is on the east side of FALC joint venture's property. Skeena Resources Ltd. may earn up to a 90% interest from General Resources Inc. in three separate properties covering approximately 46,706 ha in 100 claims located to the northwest and along the FALC kimberlite trend. Skeena has made another agreement with Shore Gold Inc. to earn up to a 70% interest in four separate properties, totaling 37 claims or 5,616 ha, located to the northwest and northeast of the FALC joint venture ground. The primary exploration target will be the Foxford property which covers two large, closely spaced kimberlite bodies, discovered by Uranerz Exploration and Mining Ltd. These kimberlites have an indicated surface area of 55.3 ha (kimberlite 179) and 32.4 ha (kimberlite 180) and a

modeled cumulative mass of more than 185 million tonnes. Skeena will be the operator on both projects and detailed airborne geophysical surveys are proposed for the first phase of investigation.

Skeena Resources Ltd. reported a total of five microdiamonds recovered from microdiamond analyses performed on drill core from 2001 vertical holes drilled on each of its two Weirdale kimberlites. No further work is planned on either of these bodies. An airborne geophysical survey will further investigate an untested geophysical anomaly on this property. JNR Resources Inc. and Kennecott Canada Exploration Inc. drilled two holes to test kimberlite targets in an unreleased location. Kennecott funded and was the program's operator. Pan Terra Exploration Corp. will follow up several prospective, geophysically defined targets on their Smeaton property with detailed geophysics and drilling later this fall.

SILICA SAND

Daren Resources Ltd.'s wholly owned subsidiary Hanson Lake Sand Corp. did not operate its silica sand open pit during the winter of 2001/2002. Daren Industries Ltd. was petitioned into bankruptcy April, 2002. The secured lenders have made application to retrieve title on the property and court proceedings are ongoing.

ACKNOWLEDGEMENTS

Personnel at Aur Resources Ltd., Cameco Corporation, Claude Resources Inc., COGEMA Resources Inc., Consolidated Pine Channel Gold Corp., De Beers Canada Exploration Inc., GLR Resources Inc., Golden Band Resources Inc., Great Western Minerals Group Ltd., Hudson Bay Mining and Smelting Co. Ltd., JNR Resources Inc., Kennecott Canada Inc., Leader Mining International Inc., Masuparia Gold Corp., Shore Gold Inc., Skeena Resources Ltd., UEX Corporation, United Carina Resources Corp., Uravan Minerals Inc., and others who assisted the authors in preparation of this report are thanked for their contribution.